McCALL HATCHERY
ANNUAL REPORT

October 1, 1989 to December 31, 1990

Prepared by:

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INTRODUCTION

McCall Hatchery is designed primarily to produce summer chinook salmon. However, McCall Hatchery is also responsible for a resident fisheries program. This consists of operating a fish trap for the collection of westslope cutthroat trout eggs, production of cutthroat and rainbow trout fry, stocking of high mountain lakes in Regions 1, 2, and 3, and redistribution of catchable rainbow trout.

HATCHERY IMPROVEMENTS

There were no hatchery improvement projects to the resident facilities at McCall Hatchery during 1990. A net pen was maintained in Payette Lake from August to October. The City of McCall has adopted plans to construct a pier and dock to accommodate two 20 ft X 20 ft net pens in Payette Lake. This facility should be complete by July 1991.

FISH HEALTH

Pathological inspections were done on the Fish Lake broodstock and the fry stocked back into Fish Lake. No pathogens were detected in either group.

SPAWNTAKING OPERATION

Fish Lake is located approximately six miles west of McCall. The trap was installed April 16. A total of 1,433 westslope cutthroat trout were trapped; 503 males and 930 females.

Spawning operations began April 18 and continued bi-weekly through May 14. Of the 881 females spawned, 70 were culled due to exhibition of rainbow characteristics. The 811 westslope females and the 70 culled females produced a total green egg take of 446,925.

The culled westslope cutthroat males and females were removed from the Fish Lake population and planted in the North Fork Payette River above Payette Lake. The eggs obtained from these fish were incubated and reared separately. A summary of spawntaking results is presented in Table 1.

The westslope cutthroat stocked back into Fish Lake for future broodstock have been fin-clipped since the 1986 plant. Of the 1,433 returning adults in 1990, only 98 fin clips returned to the trap. This may indicate much heavier recruitment to the population from natural production than from hatchery plants.

Another possibility is that the fins are regenerating. However, the oldest fin-clipped fish would have been four years old, so it may be too early to draw any conclusions.

FISH PRODUCTION

McCall Hatchery typically produces westslope cutthroat trout and rainbow trout fry, mainly for stocking into high mountain lakes. The cutthroat are obtained as green eggs from Fish Lake and the rainbow as eyed eggs, usually from Mt. Lassen Trout Farms, Red Bluff, California.

During 1990, McCall Hatchery reared Brood Year 1989 westslope cutthroat, Brood Year 1990 westslope cutthroat, Mt. Lassen rainbow, and Blackfoot Reservoir rainbow.

All stages of production of Brood Year 1990 westslope cutthroat went well, except for sac-fry incubation; 60,000 sac-fry were lost. This was due to large air bubbles forming under the Heath trays screens.

As a possible alternative source for rainbow eggs, 18,000 eyed Blackfoot Reservoir rainbow eggs were received from Grace Hatchery. These eggs were of poor quality, but the few fry produced performed very well.

The 50,000 eyed eggs received from Mt. Lassen performed well with no problems encountered.

Due to a very low egg take of summer chinook, hatchery space was available, and 28,000 Brood Year 1989 Fish Lake westslope cutthroat trout were held over for net pen production in Payette Lake. This project was slow in evolving, but did eventually happen. Ten thousand of these fish were transferred to the net pen during August and released from the net in October. Growth rates in the net were good, but high stress occurred due to low dissolved oxygen. This was attributed to heavy algae growth on the net which limited water flow through the net. Scrubbing the net every four to five days solved the problem. The remaining Brood Year 1989 westslope cutthroat were planted into Payette Lake tributaries.

Rangens soft-moist and several Bioproducts diets were fed this year. A total of 1,800 pounds of food was fed at **a** cost of $1,134.24 to produce 1,210 pounds of fish, for a conversion of 1.49. Total project cost per pound produced was $33.66.

See Table 2 for production results.

Table 1. Results of westslope cutthroat spawntake, Fish Lake, McCall Hatchery, 1990.

Species	Females spawned	Number qreen eqqs	Percent eye-up	Number **eyed**	Average fecundity
Cutthroat	811	446,925	89.6	400,640	551
Cutthroat culls	70	35,054	79.7	27,945	500

Table 2. Fish requested and produced or redistributed, McCall Hatchery, 1990.

Species and size		Number requested	Number produced	Pounds produced	Number redist	Percentage of goal achieved
Westslope Cutthroat	+	341,400	313,315	522.0		92
Rainbow	1"+	48,550	48,287	49.5		99
RBT X Cutt Hybrids	1"+	1,500		0.0	1,500	100
Grayling	1"+	8,500		0.0	8,500	100
Golden	1"+	6,250		0.0	7,250	116
Cutthroat	3"+	20,000	27,385	630.0		137
Henry's Lake Cutthroat	1"+	0	7,982	8.5		
Rainbow	9″+	88,950		0.0	92,453	104
Total		515,150	**396,969**	1,210.0	109,703	98

MCCALLTAB

FISH TRANSFERS

The only fish transferred out of McCall Hatchery this year were 60,200 westslope cutthroat to Mackay Hatchery.

McCall Hatchery received 1,500 rainbow x cutthroat hybrids from Mackay Hatchery, 8,500 grayling, and 8,000 goldens from Ashton Hatchery for redistribution.

McCall Hatchery received 55,350 catchable kamloop rainbow from American Falls Hatchery and 32,270 catchable rainbow from Grace and American Falls Hatcheries. See Table 2.